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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/320,252	05/26/1999	PAUL EVAN MATZ	02950.P033	4390

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ANDRE L MARAIS
BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD
7TH FLOOR
LOS ANGELES, CA   90025

EXAMINER
ENGLAND, DAVID E

ART UNIT	PAPER NUMBER
2143	

DATE MAILED: 03/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 January 2003* .

2a)☐ This action is **FINAL**.　　2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7-17 and 19-23* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5, 7-17, 19-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

　　If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____ .

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

　　a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1.   Claims 1 – 5, 7 – 17, 19 – 23 are presented for examination.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

2.   Claims 1, 2, 9 – 11, 21 - 23 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Chopra et al. (6167423) (hereinafter Chopra) in view of Boland (6269390).

3.   Referencing claim 1, Chopra teaches a method of executing a transaction task within a

transaction processing system, the method including:

4.   responsive to an event, identifying a workflow associated with the event, (e.g. col. 1, line

34 – col. 2, line 33 & col. 5, lines 1 – 24); and

5.   distributing a task, that at least partially executes the workflow, to an available thread

within a pool of threads operating within a multiprocessor system, (e.g. col. 1, line 34 – col. 2,

line 33 & col. 5, lines 1 – 24). But Chopra does not specifically teach identifying a processor

affinity attributed to the task; and

6.   assigning the available thread to a processor within the multiprocessor system according

to the processor affinity attributed to the task. Boland teaches identifying a processor affinity

attributed to the task, (e.g. col. 1, line 11 – col. 2, line 26); and

7.   assigning the available thread to a processor within the multiprocessor system according

to the processor affinity attributed to the task, (e.g. col. 1, line 11 – col. 2, line 26). It would have

been obvious to one skilled in the art at the time the invention was make to combine Boland with

Chopra because if a task is allocated to a specific processor that is designed to process specific

threads of tasks it could speed up the processing time, making the system more efficient.

8.   Referencing claim 2, Chopra teaches wherein the event comprises a transaction event and

the task comprises a transaction task responsive to a transaction request associated with the

transaction event, (e.g. col. 8, lines 29 – 65).

9.   As per claim 21, Chopra teaches a method of operating a transaction processing system

employing a multiprocessor architecture, the method including:

10.   servicing the queue of tasks utilizing a pool of threads executable within a multiprocessor

environment, (e.g. col. 5, lines 1 – 37 & col. 8, lines 44 – 65). Chopra does not specifically teach

a symmetric multiprocessor environment;

11.   establishing a queue of tasks, the queue of tasks including tasks for both system and

transactional functions. Boland teaches a symmetric multiprocessor environment, (e.g. col. 4,

lines 40 – 60 & col. 1, line 11 – col. 2, line 26);

12.   establishing a queue of tasks, the queue of tasks including tasks for both system and

transactional functions, (e.g. col. 1, line 11 – col. 2, line 26). It would have been obvious to one

skilled in the art at the time the invention was make to combine Boland with Chopra because

more then one task could be processed on more than one processor that is used for specific tasks

therefore, it would be faster and more efficient to have a queue of tasks utilizing a pool of

threads for multiple processors.

13.   As per claim 22, Chopra teaches wherein the tasks for the system functions include any

one of reporting, administration or maintenance tasks performed within the transaction

processing system, (e.g. col. 6, line 45 – col. 7, line 26).

14.   As per claim 23, Chopra teaches wherein the tasks for the transactional functions include

any one of routing, transaction data storage or transaction data retrieval tasks performed to

facilitate a transaction within the transaction processing system, (e.g. col. 5, line 48 – col. 6, line

29).

15.   Claims 9 – 11 are rejected for similar reasons as stated above.

16.   Claims 3 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chopra

(6167423) in view of Boland (6269390) in further view of Szlam et al. (6314089) (hereinafter

Szlam).

17.   As per claim 3, Chopra and Boland do not specifically teach wherein the transaction task

comprises a transaction routing task that routes the transaction request associated with the

transaction event to an agent of the transaction processing system. Szlam teaches wherein the

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transaction task comprises a transaction routing task that routes the transaction request associated with the transaction event to an agent of the transaction processing system, (e.g. col. 21, lines 1 – 19). It would have been obvious to one skilled in the art at the time the invention was make to combine Szlam with the combine system of Chopra and Boland because if a transaction task needed a resource that an agent possessed the transaction task could request it from the agent therefore aiding in the completion of the task.

18.   Claim 16 is rejected for similar reasons as stated above.

19.   Claims 4, 12, 13, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chopra (6167423) in view of Boland (6269390) in further view of Emmond (5327557).

20.   As per claim 4, Chopra and Boland do not specifically teach within the transaction task comprises a transaction information task to either store or retrieve information pertinent to a transaction. Emmond teaches within the transaction task comprises a transaction information task to either store or retrieve information pertinent to a transaction, (e.g. col. 6, lines 49 – 64). It would have been obvious to one skilled in the art at the time the invention was make to combine Emmond with the combine system of Chopra and Boland because if a transaction task's information could aid in the process of another transaction task it would be more efficient to have the first transaction task be able to store it's information so another transaction task could retrieve it for future use.

21.   As per claim 12, Chopra teaches a scheduler that issues the task to the thread within the

pool of threads, (e.g. col. 1, line 62 – col. 2, line 9). Chopra and Boland do not specifically teach

the task queue. Emmond teaches the task queue, (e.g. col. 5, line 19 – col. 6, line 22). It would

have been obvious to one skilled in the art at the time the invention was make to combine

Emmond with the combine system of Chopra and Boland because more then one task could be

processed at one time therefore, it would be faster and more efficient to have a queue of tasks

utilizing a pool of threads.

22.   Claim 13 and 17 are rejected for similar reasons as stated above.

23.   Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chopra (6167423)

in view of Boland (6269390) in further view of Sequeira (6222530).

24.   As per claim 5, Chopra and Boland do not specifically teach wherein the task has a

real-time priority and is distributed in accordance with the real-time priority to the available

thread within the pool of threads. Sequeira teaches wherein the task has a real-time priority and

is distributed in accordance with the real-time priority to the available thread within the pool of

threads, (e.g. col. 9, lines 16 – 31). It would have been obvious to one skilled in the art at the

time the invention was make to combine Sequeira with the combine system of Chopra and

Boland because if an incoming task that is important, needs to be completed first, it could be sent

to the next available thread within the pool of threads before the other tasks and be processed

sooner.

25.   Claims 7, 8, 19, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Chopra (6167423) in view of Boland (6269390) in further view of Lucovsky et al. (6223207)

(hereinafter Lucovsky).

26.   As per claim 7, Chopra and Boland do not specifically teach assigning the available

thread to a processor within the multiprocessor system according to a thread priority. Lucovsky

teaches assigning the available thread to a processor within the multiprocessor system according

to a thread priority, (e.g. col. 8, lines 13 – 40). It would have been obvious to one skilled in the

art at the time the invention was make to combine Lucovsky with the combine system of Chopra

and Boland because if a thread that has important information that other threads rely on does not

get processed first it could cause errors in the system.

27.   As per claim 8, Chopra and Boland do not specifically teach assigning the thread priority

to the available thread based on a priority, of the task distributed to the available thread.

Lucovsky teaches assigning the thread priority to the available thread based on a priority, of the

task distributed to the available thread, (e.g. col. 8, lines 13 – 40). It would have been obvious to

one skilled in the art at the time the invention was make to combine Lucovsky with the combine

system of Chopra and Boland because if an incoming task that is important, needs to be

completed first, it could be sent to the next available thread within the pool of threads therefore,

causing the thread to have the same priority as the task therefore having the task be processed

sooner.

28.   Claims 19 and 20 are rejected for similar reasons as stated above.

29.   Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chopra
(6167423) in view of Boland (6269390) in further view of Emmond (5327557) in further view of
Sequeira (6222530).

30.   As per claim 14, Chopra, Boland and Emmond do not specifically teach the scheduler
issues the task from the task queue according to a priority dynamically assigned to the task.
Sequeira teaches the scheduler issues the task from the task queue according to a priority
dynamically assigned to the task, (e.g. col. 5, lines 46 – 56). It would have been obvious to one
skilled in the art at the time the invention was make to combine Sequeira with the combined
system of Chopra, Boland and Emmond because if a new task that is important to the processing
of upcoming task it would have to be processed first so to prevent errors in the system.

31.   Claim 15 is rejected for similar reasons as stated above.

32.   Applicant's arguments with respect to claims 1 – 5, 7 – 17, 19 – 23 have been considered
but are moot in view of the new ground(s) of rejection.

Conclusion

33.   The prior art made of record and not relied upon is considered pertinent to applicant's
disclosure.

34.   a.   Alfieri U.S. Patent No. 5745778 discloses Apparatus and method for improved

CPU affinity in a multiprocessor system.

35.   b.   Lawless et al. U.S. Patent No. 5818469 discloses Graphics interface processing

methodology in symmetric multiprocessing or distributed network environments.

36.   c.   Barton et al. U.S. Patent No. 5842226 discloses Virtual memory management for

a micro kernel system with multiple operating systems.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to David E. England whose telephone number is 703-305-5333.

The examiner can normally be reached on Mon-Thur, 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David A. Wiley can be reached on 703-308-5221. The fax phone numbers for the

organization where this application or proceeding is assigned are none for regular

communications and none for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is none.

David E. England
Examiner
Art Unit 2143

De *ÐÇ*
February 24, 2003

DAVID WILEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100